



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,893	09/08/2000	Joachim Zell	MBHB00-743	2802
20306	7590	09/02/2004	EXAMINER	
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP 300 S. WACKER DRIVE 32ND FLOOR CHICAGO, IL 60606			HANNETT, JAMES M	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/657,893	ZELL, JOACHIM
	Examiner James M Hannett	Art Unit 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 6/29/2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-14 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 07 November 2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 6/21/01 & 2/28/02.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Claims 1-14 in the reply filed on 6/29/2004 is acknowledged.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for scanning frames of film in which defects on the film are identified by determining if the pixel values exceed a predetermined threshold.

The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1: Claims 1, and 4-14 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,680,638 Childs.

2: As for Claim 1, Childs teaches a method of scanning frames of cinematographic film to generate digital values of pixels constituting images on the film frames; (Column 2, lines 14-16) wherein pixels corresponding to defects on the film are identified and the values of such pixels are adjusted to compensate for the defects; (Column 2, Lines 35-48) the identification of the pixels corresponding to defects on the film being carried out by identifying pixels whose value is beyond a predetermined threshold.

3: In regards to Claim 4, Childs teaches on Column 2, lines 34-48 that all pixels in the CCD array are compared to a predetermined threshold. Therefore, pixels which are generally aligned with an identified pixel in the direction of film transport are compared to the predetermined threshold. Childs teaches on Column 5, Lines 4-6 that if the pixels have a value beyond the predetermined threshold, a defect corresponding to a scratch on the film is identified as including the generally aligned pixels having a value beyond the predetermined threshold.

4: As for Claim 5, Childs teaches on Column 1, lines 49-53 and Column 3, Lines 27-50 the value of an identified pixel is compared to the value of the corresponding pixel in the preceding and/or subsequent frames and, if the difference between the value of the identified pixel and the value of the corresponding pixel in the preceding and/or subsequent frame is greater than a predetermined threshold, the identified pixel is identified as corresponding to a dirt defect on the film. Childs teaches comparing sequential frames to determine if a defect occurs in several frames of image data. If the defect is limited to just one frame the defect corresponds to a blemish on the one frame of film.

5: In regards to Claim 6, Childs teaches on Column 1, lines 49-53 and Column 3, Lines 27-50 the value of an identified pixel is compared to the value of the corresponding pixel in the

preceding and/or subsequent frames and, if the difference between the value of the identified pixel and the value of the corresponding pixel in the preceding and/or subsequent frame is greater than a predetermined threshold, the identified pixel is identified as corresponding to a dirt defect on the film. Childs teaches comparing sequential frames to determine if a defect occurs in several frames of image data. If the defect is limited to just one frame the defect corresponds to a blemish on the one frame of film.

6: As for Claim 7, Childs teaches on Column 2, lines 34-48 a method of scanning frames of cinematographic film to generate digital values of pixels constituting images on the film frames; (Column 2, lines 14-16), Childs teaches that all pixels in the CCD array are compared to a predetermined threshold. Therefore, pixels which are located in a column generally aligned with the identified pixel and extending in the direction of the film transport to a predetermined threshold value are compared to the predetermined threshold. Childs teaches on Column 5, Lines 4-6 that if the pixels have a value beyond the predetermined threshold, a defect corresponding to a scratch on the film is identified as including the generally aligned pixels having a value beyond the predetermined threshold.

7: In regards to Claim 8, Childs teaches on Column 1, lines 49-53 and Column 3, Lines 27-50 wherein pixels corresponding to the scratch in subsequent frames of the film are identified by comparing each of the pixels in the array to a predetermined threshold value and identifying those pixels having a value extending beyond the predetermined threshold value as constituting the pixels corresponding to the scratch.

8: As for Claim 9, Childs teaches on Column 4, Lines 33-35 the values of the identified pixels are replaced by values from pixels adjacent the defect.

9: In regards to Claim 10, Childs teaches on Column 6, Lines 1-13 the defect corresponds to a scratch on the film, the values of the identified pixels are replaced by values obtained by interpolation along the lateral line of the image on which the pixel to be replaced is located.

10: As for Claim 11, Childs teaches on Column 3, Lines 17-21 when the defect corresponding to dirt on the film, the values of the identified pixels are replaced by values obtained from the values of the pixels corresponding to the identified pixels in the preceding and/or subsequent frames.

11: In regards to Claim 12, Childs teaches on Column 4, Lines 14-29 when the defect corresponds to dirt on the film, pixels surrounding the one or more identified pixels which represent a blurred edge of the defect are identified and compensated for although the value of these pixels is not beyond the predetermined threshold.

12: As for Claim 13, Childs teaches on Column 4, Lines 14-29 if the width of the scratch exceeds a predetermined number of pixels (This is viewed by the examiner as a scratch that has any width), at least one column of pixels from within the scratch defect is removed, image pixels outside the scratch defect are moved in to compensate for the removed pixels; Column 3, Lines 43-49, Childs teaches on Column 6, Lines 1-12 pixels within the scratch defect are corrected by using values interpolated from pixels on either side of the scratch.

13: In regards to Claim 14, Childs teaches on Column 4, Lines 14-29 A method of scanning frames of cinematographic film to generate digital values of pixels constituting images on the film frames; (Column 2, lines 14-16), in which pixels corresponding to a scratch defect on a film frame are identified and the values of such pixels are adjusted to compensate for the defect, (Column 2, Lines 35-48). Childs teaches if the width of the scratch exceeds a predetermined

number of pixels, (This is viewed by the examiner as a scratch that has any width) at least one column of pixels from within the scratch defect is removed, image pixels outside the scratch are moved in to compensate for the removed pixels; Column 3, Lines 43-49. Childs teaches on Column 6, Lines 1-12 pixels within the scratch defect are corrected by using values interpolated from pixels on either side of the scratch.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14: Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,680,638 Childs in view of USPN 5,416,516 Kamayama et al.

15: In regards to Claim 2, Childs teaches a system that electronically converts film into electronic data. Childs teaches comparing the pixel data to a predetermined threshold value to determine if a scratch or blemish is present on the image. However, Childs does not teach that the predetermined threshold is set at a maximum, which is close to pure white.

Kamayama et al teaches a system for identifying white flaw defects and black flaw defects. Kamayama et al teaches on Column 20, Lines 37-44 that it is advantageous when designing a system to supply threshold levels corresponding to white flaw defects and black flaw defects in order to allow the system to better identify film defects.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the threshold detection circuit of Childs to set two threshold values

equal to white flaw defects and black flaw defects as taught by Kamayama et al in order to allow the system to better identify film defects.

16: As for Claim 3, Childs teaches a system that electronically converts film into electronic data. Childs teaches comparing the pixel data to a predetermined threshold value to determine if a scratch or blemish is present on the image. However, Childs does not teach that the predetermined threshold is set at a minimum value, which is close to pure black.

Kamayama et al teaches a system for identifying white flaw defects and black flaw defects. Kamayama et al teaches on Column 20, Lines 37-44 that it is advantageous when designing a system to supply threshold levels corresponding to white flaw defects and black flaw defects in order to allow the system to better identify film defects.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the threshold detection circuit of Childs to set two threshold values equal to white flaw defects and black flaw defects as taught by Kamayama et al in order to allow the system to better identify film defects.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,526,040 Foley teaches a signal processing apparatus for film scanners; USPN 5,805,207 Watkinson et al teaches the use of a system for compensating for cinematographic artifacts; USPN 5,847,754 Thornton teaches the use of a film scanner that can reduce film imperfections; USPN 5,589,887 Wischermann teaches a method for detecting and correcting video signal errors; USPN 6,208,382 Glenn teaches the use of a method for detecting

and correcting video signal errors; USPN 6,002,433 Watanabe et al teaches the use of a defective pixel detecting circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
March 10, 2004

Wendy R. Garber
WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600